(ii) Subjecting a representative model to a proof test or experimental stress analysis described in paragraph A–22 of section I the ASME Boiler and Pressure Vessel Code (incorporated by reference; see 46 CFR 56.01–2); or

(iii) Other means specifically accepted by the Marine Safety Center.

(3) Valves must be tested in accordance with § 56.97–5 of this part.

(4) If welded, valves must be welded in accordance with subpart 56.70 of this part and part 57 of this chapter or by other processes specifically approved by the Marine Safety Center.

(d) Where liquid trapped in any closed valve can be heated and an uncontrollable rise in pressure can result, means must be provided in the design, installation, and operation of the valve to ensure that the pressure in the valve does not exceed that allowed by this part for the attained temperature. (For example, if a flexible wedge gate valve with the stem installed horizontally is closed, liquid from testing, cleaning, or condensation can be trapped in the bonnet section of the closed valve.) Any resulting penetration of the pressure wall of the valve must meet the requirements of this part and those for threaded and welded auxiliary connections in ASME B16.34 (incorporated by reference; see 46 CFR 56.01–2).

[CGD 77–140, 54 FR 40604, Oct. 2, 1989; 55 FR 39968, Oct. 1, 1990; USCG–2003–16630, 73 FR 65176, Oct. 31, 2008]

§ 56.20–5 Marking (modifies 107.2).

Each valve shall bear the manufacturer's name or trademark and reference symbol to indicate the service conditions for which the manufacturer guarantees the valve. The marking shall be in accordance with MSS SP–25 (incorporated by reference; see 46 CFR 56.01–2).

[USCG–2003–16630, 73 FR 65176, Oct. 31, 2008]

§ 56.20–7 Ends.

(a) Valves may be used with flanged, threaded, butt welding, socket welding or other ends in accordance with applicable standards as specified in subpart 56.60.

§ 56.20–9 Valve construction.

(a) Each valve must close with a right-hand (clockwise) motion of the handwheel or operating lever as seen by one facing the end of the valve stem. Each gate, globe, and angle valve must generally be of the rising-stem type, preferably with the stem threads external to the valve body. Where operating conditions will not permit such installations, the use of a nonrising-stem valve will be acceptable. Each nonrising-stem valve, lever-operated valve, or other valve where, because of design, the position of the disc or closure mechanism is not obvious must be fitted with an indicator to show whether the valve is opened or closed, except as provided for in § 56.50–1(g)(2)(iii) of this part. No such indicator is required for any valve located in a tank or similar inaccessible space when indicators are available at accessible sites. The operating levers of each quarter-turn (rotary) valve must be parallel to the fluid flow when open and perpendicular to the fluid flow when closed.

(b) Valves of Class I piping systems (for restrictions in other classes refer to sections on low temperature service), having diameters exceeding 2 inches must have bolted, pressure seal, or breech lock bonnets and flanged or welding ends, except that socket type welding ends shall not be used where prohibited by § 56.30–5(c) of this part, § 56.30–10(b)(4) of this part for the same pressure class, or elsewhere in this part. For diameters not exceeding 2 inches, screwed union bonnet or bolted bonnet, or bonnetless valves of a type which will positively prevent the stem from screwing out of the body may be employed. Outside screw and yoke design must be used for valves 3 inches and larger for pressures above 600 pounds per square inch gage. Cast iron valves with screwed-in or screwed-over bonnets are prohibited. Union bonnet type cast iron valves must have the bonnet ring made of steel, bronze, or malleable iron.

(c) Valves must be designed for the maximum pressure to which they may be subjected, but in no case shall the design pressure be less than 50 pounds per square inch gage. The use of wafer type resilient seated valves is not permitted for shell connections unless